98

Location ARAVAIPA CREEK (UPPER) Date 3/28/11

Project / Client FISH HEALTH ASSESSMENT

C. CROWDER, T. GROSCH, N. BERNDT, K. MOSHER

START

START ABOVE ROAD CROSSING 32 53 00
110 24 07

125 0555941
3685534

ST 13:26

SH 1 2m x 3m 3 AGCH

SH 2 ST 13:29 33+39+16+7 MEFU
2m x 3m 7 AGCH

SH 3 ST 13:34 3 AGCH
2m x 1.5m 1 TICO

SH 4 ST 13:36 1 TICO
2m x 2m 1 AGCH
1 MEFU

SH 5 ST 13:46 2 RHOS 1 PACL
2m x 3m 2+3 MEFU

SH 6 ST 13:47 3 TICO
2m x 4m 2 AGCH

SH 7 ST 13:51 1 AGCH
2m x 3m

SH 8 ST 13:52 1 MEFU
2m x 4m 2 AGCH

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Location ARAVAIPA CREEK (EAST) Date 3/28/2011

Project / Client FISH HEALTH ASSESSMENT

C. CROWDER, T. GROSCH, N. BERNDT, K. MOSHER

4 pages

SH 9 ST 13:55 2 RHO3 2 TICO
2m x 4m 4 MEFU

SH 10 ST 13:58 4+2+1 MEFU
2m x 4m 1 TICO

SH 11 ST 14:03 1 TICO 1 AGCH
1.5m x 4m 1 MEFU

SH 12 ST 14:04 1+3 TICO 1 MEFU
2m x 5m 3 PACL (DESERT)

SH 13 ST: 14:08 4 AGCH YOY
2m x 2m

SH 14 ST: 14:13 1-6 TICO
2m x 7m 2+1 MEFU
3 CATOSTOMID

SH 15 ST: 14:19 9 MEFU
2m x 6m

SH 16 ST: 14:24 C+2 MEFU
2m x 5m 1 TICO

SH 17 ST. 14:23
2m x 1.5m 1 TICO (YOY) 1 MEFU 4 SUCKERS

AZGFD000174

100

Location Aravaipa Creek/East Side Date 3/28/2011

Project / Client Fish Health Assessment

C. Crowder, T. Grosch, N. Bernot, K. Mosher

SH 18	St 1425	2 MEFU	4 AgCH
2m x 6m			
SH 19	St 1426	8 AGCH	1 MEFU
2m x 2m			
SH20	St 1427	1 PACL	1 MEFU
2m x 2m		2 CAIN	
SH21	St 1429	4 TWO	2 MOFU 8 AGCH
1m x 2m			
SH22	St 1430	9 AGCH	1+2 MEFU
2m x 3m			
SH23	St 1432	2+1 MEFU	4 TWO
2m x 5m			

End: 12S 0556103 3638429

101

Location Aravaipa / East Side Date 3/28/11

Project / Client Fish Health Assessment

C. Crowder, T. Grosch, N. Bernot, K. Mosher

Buckets	Cooler
T= 23.6°C	T= 21.3°C
pH = 7.42	pH= 8.44
Cond 351 µS	Sal 710 ppm
Sal 172 ppm	
TDS 242 ppm	

1st xchange: 15:00

2nd xchange: 15:17

Bucket Final Temp: 22.7

Aravaipa Creek

21.0 C°

TDS 228 ppm

CON 326 µS

PH 8.06

SAL 154 ppm

D.O. 7.58 mg/l

AZGFD000175

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Location: ARAVAIPA / WEST BELOW BARRIER Date: 3/29/2011

Project / Client: FISH HEALTH ASSESSMENT

C. CROWDER, T. GROSCH, N. BERNOT, K. MOSHER

Start time 8:05

ST- 12S 0534084
3634340

N 32° 50' 47
W 110° ~~38'~~ 08

ALL SAMPLES FOR KS1 ARE RIFFLES

KS1	3m	~15 AGCH
	TIME: 8	RIF
KS2	8m	~12 AGCH 1 CYLU 1 AM. SP.
KS3	6m	~75 AGCH
KS4	1.5m	~10 AGCH
KS5	4m	~6 TICO 2 Sucker sp.
KS6	3.5m	6 sucker sp 1 AGCH
KS7	2m	5 sucker sp
KS8	4m	6 TICO 20 sucker sp 2 AGCH

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Location: ARAVAIPA CREEK / WEST Date: 3/29/2011

Project / Client: FISH HEALTH ASSESSMENT

C. CROWDER, T. GROSCH, N. BERNOT, K. MOSHER

KS9	3m	NFC
KS10	4m	60 Sucker sp 10 AGCH 1 TICO
KS11	5m	12 sucker sp 1 AGCH
KS12	3.5m	66 Sucker sp 17 AGCH
KS13	3m	22 Sucker sp 5 AGCH 1 TICO
KS14	3m	11 Sucker sp 2 TICO 4 AGCH
KS15	3m	21 Sucker sp 5 AGCH
KS16	2m	2 TICO 8 Sucker sp.
KS17	2.5m	20 Sucker sp 30 AGCH 1 TICO
KS18	2.5m	1 TICO 16 AGCH 34 Sucker sp
KS19	3m	10+4 AGCH 10+5 SUCKER 4 AGCH
KS20	2.5m	4 TICO 5+4+3 CATOSTOMUS
KS21	3m	3+1+1 AGCH 7+6+7 CATO.
KS22	4m	2 AGCH 2 SUCKER
KS23	2.5m	2+20 AGCH 5+6 SUCKER
KS24	3m	9+18+6 AGCH 1 CATOSTOMUS

AZGFD000176

Location ARAVAIPA CREEK/WEST SIDE BELOW BARRIER Date 3/29/2011

Project / Client FISH HEALTH ASSESSMENT

C CROWDER, T GROSCH, N. BERNOT, K. MOSHER

KS 25	2.5m	11 AGCH 5+3 GAMBUSIA
KS 26	3m	6+6 AGCH 4+2 SUCKER
KS 27	3.5m	2 AGCH 1 SUCKER
KS 28	4m	4 TICO 4+4 AGCH 3+3 SUCKER
KS 29	3m	5 AGCH 3 SUCKERS
KS 30	3.5m	20 AGCH
KS 31	4m	3 SUCKER 2 AGCH
KS 32	4m	2 AGCH
KS 33	3m	NFC
KS 34	4m	1 SUCKER

Location ARAVAIPA CREEK/WEST SIDE Date 3/29/2011

Project / Client FISH HEALTH ASSESSMENT

C. CROWDER, T. GROSCH, N. BERNOT, K MOSHER

STS 9:34

KS 35	5m	5 TICO 6 SUCKERS
KS 36	6m	46+87+43 SUCKER. 12+1+2 AGCH 1 CYLU
KS 37	4m	29+19+28 SUCKERS 9+1 AGCH 1 TICO
KS 38	5m	23+49+42 SUCKERS 5 AGCH
KS 39	4m	38+31 SUCKER 6 AGCH 2 TICO 1 ANNA SPP.
KS 40	5m	4+2 SUCKER 2+4 AGCH

END: 10:10 AT BARRIER

12s 534662

3634055

Water Chem

Temp 18.9 pH 8.49

Sal 177 ppm DO 11.05 mg/L

TDS 250 ppm

Cond 363 µS

AZGFD000177